Essential Fish Habitat project status report

Reporting date: 9/05/2007

Project number: 2007-07

Title: Temporal dynamics of habitat use in juvenile Pacific cod

PIs: Allan Stoner, Benjamin Laurel, Brian Knoth, Clifford Ryer & Thomas Hurst

Funding year: 2007

Funding amount: $46,317

Status: ☐ Complete ☒ Incomplete, on schedule ☐ Incomplete, behind schedule

Planned completion date if incomplete: April 2008

Reporting: Have the project results been reported? If yes, where were the results reported?
No, the first work for this project was conducted in July 2007, with surveys and collections in Kodiak. Field work continued in August and will extend into October 2007. Laboratory investigation with live cod will extend into early 2008, and at least one manuscript will follow on habitat utilization.

Results: What is the most important result of the study?
1) Comparisons in seine collections and baited camera surveys in two focal sites in Kodiak (20 permanent stations) showed that recruitment of age-0 Pacific cod in 2006 was approximately one order of magnitude larger than in 2007. The same trend also appears to be mirrored in the other gadid species i.e., walleye pollock and saffron cod. Despite low catches in 2007, the ontogenetic shift in habitat preference (i.e., eelgrass to Laminaria to open habitats) appears to be identical to the patterns observed in 2006.
2) The 2006 year class was prevalent as age-1 juveniles in the 2007 survey, allowing for a detailed examination of their distribution by depth and habitat complexity (analysis ongoing). Age 1 cod were seldom caught in the seine survey but were routinely surveyed in large numbers using a baited cameras set along various depth gradients.
3) Age-0 and age-1 Pacific cod make diel movements inshore and offshore.
4) Seasonal variation in habitat utilization in age-0 and age-1 Pacific cod will be explored through seine and baited camera surveys conducted into the fall 2007.
5) Laboratory experiments examining habitat use in age-1 Pacific cod will be conducted in the fall to complement 2007 field observations. The possible role of age-1 Pacific cod as predators on age-0 cod will also be explored in laboratory.